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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,607	10/23/2001	Lino Tavares	208.1004US	1029

7590 07/28/2005

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EXAMINER
GHALI, ISIS A D

ART UNIT	PAPER NUMBER
1615	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/045,607	TAVARES ET AL.	
	Examiner	Art Unit	
	Isis Ghali	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-11,13,14,16,20,22-24,29,30,32-38 and 40-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-11,13,14,16,20, 22-24,29,30,32-38 and 40-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The receipt is acknowledged of applicants' amendment, filed 05/16/2005.

Claims 1-7, 12, 15, 17-19, 21, 25-28, 31 and 39 have been canceled. Claims 46-49 have been added

Claims 8-11, 13, 14, 16, 20, 22-24, 29, 20, 32-28, and 40-49 are included in the prosecution.

Claim Rejections - 35 USC § 103

1. Claims 8-11, 13, 14,16, 20-24, 29, 30, 32-38, 40-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,910,205 ('205).

US '205 teaches a transdermal delivery system of loratadine for the treatment of allergic conditions (abstract). The system is formed of patch applied to skin for a specific period of time to permit the penetration of a desired amount of loratadine through the skin. The patch will be worn for one to four days and provides a total daily dose of 0.5 to 5 mg (col.2, lines 28-34). The patch comprises a reservoir having 10-20% loratadine; 50-60% solvent; and 20-35% fatty acid esters, i.e. softening agents (col.2, lines 19-29). The patch further comprises a backing layer and a release liner (col.2, line 64; col.3, line 6). The patch delivers 2.26 mg/15cm^2/day of loratadine (Table I). The reference

disclosed that the dose may be varied depending on the size and age of the patient, and may also depends upon the severity of the condition being treated (col.3, lines 56-60). The frequency of dosage application can be once every 3 days to once every 7 days (col.4, lines 5-10).

The reference does not teach the specific delivery profile of loratadine, the specific amounts of different ingredients, or specific solvents and softening agents in the transdermal delivery system.

It is expected to have the same delivery profile from a transdermal delivery device disclosed by the prior art that has the same composition and the same amount of loratadine.

The claimed amounts of different ingredients in the reservoir layer do not impart patentability to the claims because it is within the skill in the art to select optimal parameters in order to achieve a beneficial effect. Thus, the claimed amounts of the drug, solvent and the softening agent are not considered critical, absent evidence to the contrary.

The selection of particular solvent and softening agent for a specific drug is within the skill of the art depending on the properties of the each drug and its intended use. Thus the solvents and softening agents claimed in claims 37, 38, 44, and 45, do not impart patentability to the presented claims, absent evident to the contrary.

The determination of the relative release rate via an in-vitro permeation test utilizing a Valia-Chien cell is known in the art and it is not part of the claimed method of treating allergic rhinitis; or even a part of the transdermal device that provide particular

plasma levels of loratadine. It is only an in-vitro diagnostic test that is expected to provide the same results obtained from two similar delivery devices tested under the same circumstances, and the recitation of this in-vitro test does not impart patentability to claims directed to method of treating allergic rhinitis or claims directed to transdermal device applied to patients to provide specific plasma levels of loratadine, i.e. in vivo use.

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a transdermal device to deliver loratadine to treat allergic conditions as disclosed by US '205, and adjust the dose to deliver a specific desired plasma profile according to the patient's need, motivated by the teachings of US '205 that the dose may be varied depending on the size and age of the patient, and may also depends upon the severity of the condition being treated, with reasonable expectation of having a transdermal drug delivery device that delivers loratadine at the desired levels and treats allergic conditions effectively.

Response to Arguments

Applicant's arguments filed 05/16/2005 have been fully considered but they are not persuasive. Applicants traverse the above obviousness rejection by arguing that the reference does not even apply the Valia-Chien cell to transdermal system containing loratadine. The reference does not teach the delivery profile. The examiner relied upon impermissible hindsight vision and has not provided any motivation to treat the patient with a device which provides the specific relative release rates and specific plasma

levels as the present invention. Applicants request allowing the claims having the language "consisting essentially of".

In response to the above arguments, the examiner position is that the claims are directed to method of treating seasonal allergy by applying loratadine transdermally. The method of determining the release rate from the transdermal device do not consider critical and do not impart patentability to the claims since the reference disclosed administering loratadine transdermally in the same amount for the same period of time to treat seasonal allergy. It is expected to obtain the same release profile from the device of the prior art that is applied to the patient for 5-7 days and delivers the same daily amount to the patient which is 2.26 mg/15 cm^2/day. The reference disclosed providing constant blood level of loratadine to the patient in need, as desired by applicants, col.2, lines 36-37. It is expected to obtain the same plasma level from the transdermal patch that deliver loratadine to the skin at the same rate. Determination of the drug dose is within the skill of the art and it is controlled by many variables such as age, weight, severity of the allergic reaction, etc. In any event, the reference disclosed the same amount of loratadine in the transdermal patch as claimed by applicants, i.e. 10-20%.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does

not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, motivation to modify the dose would have been driven from the teaching of US '205 that the dose may be varied depending on the size and age of the patient, and may also depends upon the severity of the condition being treated, with reasonable expectation of having a transdermal drug delivery device that delivers loratadine at the desired levels and treats allergic conditions effectively.

Regarding the expression "consisting essentially of", the expression limits the scope of the claim to the specified ingredients, and those that do not materially affect the basic and novel characteristics of the composition. *In re Janakirama-Rao*, 317 F 2d 951, 137 USPQ 893 (CCPA 1963). When applicant contends that modifying components in the reference's composition are excluded by the recitation of "consisting essentially of", applicant has the burden of showing the basic and novel characteristics of the claimed composition, i.e. showing that the introduction of these components

would materially change the characteristics of applicant's composition. *In re De Lajarte,* 337 F 2d 870, 143 USPQ 256 (CCPA 1964).

2. Claims 37, 38, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over US '205 in view of US 5,240,711 ('711).

The teachings of US '205 are discussed above.

The reference does not teach the specific solvents and softening agents and their amount.

US '711 teaches a transdermal drug delivery device for controlled delivery of drug comprising backing layer, polymeric reservoir and protective liner. The reservoir comprising: 20-90% of polymeric material, 0.1-20% of the drug, 0.1-30% softener, and 0.1-30% of solvent (abstract; col.1, line 64-67; col.4, line 23). The reservoir is pressure sensitive adhesive and contains rubber-like co-, homo-, or block-copolymers (col.3, lines 25-26). The solvents used include those contain at least one acidic group, monoesters of dicarboxylic acids, such as monoethyl glutarate (col.4, lines 13-16). The softeners include medium chain triglycerides of the caprylic/capric acids or coconut oil; and dodecanol (col.3, lines 63-68; col.4, lines 1-2; col.7, lines 25-29). The backing is flexible, inflexible or aluminum foil (col.7, lines 5-12).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to treat allergic conditions using a transdermal device comprising loratadine that provides a specific delivery profile and having particular structure as disclosed by US '205, and select the specific solvents and softening agents disclosed

by US '711, motivated by the teaching of US '711 that the transdermal device having these particular ingredients in its reservoir layer provides a controlled delivery of the drug, with reasonable expectation of having a transdermal drug delivery device to deliver loratadine to treat allergic conditions effectively.

Response to Arguments

Applicant's arguments filed 05/16/2005 have been fully considered but they are not persuasive. Applicants traverse the above rejection by arguing that US '711 does not cure the deficiencies of US '205.

In response to the above argument, the examiner position is US '711 is relied upon for the solely teaching of the solvents and softening agents that are known in the art and widely used in conventional transdermal devises for controlled release of the drugs. In considering the disclosure of the reference, it is proper to take into account not only the specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968). The rational to modify or to combine the prior art does not have to be expressly stated in the prior art; the rational may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,045,319 disclosed transdermal delivery system to deliver

pharmaceuticals wherein the in-vitro release studies can be conducted using Valia-Chien diffusion cell.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isis Ghali whose telephone number is (571) 272-0595. The examiner can normally be reached on Monday-Thursday, 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272-0602.. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isis Ghali
Examiner
Art Unit 1615

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